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ISSN 0714-6752 ✓

AIR RESOURCES BRANCH

RESEARCH
GRANTS
PROGRAMME

1983/84



Ontario

Ministry
of the
Environment

The Honourable
Keith C. Norton, Q.C.,
Minister

Gérard J. M. Raymond
Deputy Minister

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AIR RESOURCES BRANCH

Atmospheric Research and Special Programs Section

ARB-41-82-ARSP

RESEARCH GRANTS PROGRAMME

INFORMATION BOOKLET

(REVISED)

1983/84

Ontario Ministry of the Environment

September 1982

880 Bay Street, 4th Floor,

Toronto, Ontario.

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Attachment: Form RGP-1 (2 copies)

CHECKLIST OF PERTINENT DETAILS

1983/84 GRANTS

1. The deadline for submission of proposals - January 31, 1983 - will be strictly enforced.

PROPOSALS RECEIVED AFTER THE DEADLINE WILL BE CONSIDERED,
ONLY IF FUNDS ARE STILL AVAILABLE AFTER THE FIRST BATCH
OF APPLICATIONS HAS BEEN PROCESSED.

2. Required forms to be completed -

Two copies of the proposal (RGP booklet, Section 3), including

- signatures as required
- the name, address and telephone number of the administrator(s)
 - (a) who will be responsible for financial administration of the grant,
 - and (b) to whom the award cheque should be sent.

The summary form RGP-1 (two pages), is enclosed in the booklet or available
from : Dr. W. C. Tam, (416) 965-4081.

3. Research Grants Program Annual Seminar - scheduled for January 18 and 19, 1983.
4. Current grant recipients are reminded to submit a status report describing their progress to date, or a completion report by March 1, 1983. A financial statement is also required by March 31, 1983 (See sections 7 and 13).

And then, no longer haunted by
unlived presence, to live the cities:
to furnish, out of the traffic and smog and the shambles of dead precursors,
a civil habitation that is
human, and our own.

Dennis Lee
Civil Elegies and Other Poems
House of Anansi Press, 1972

1. INTRODUCTION:

The Air Resources Branch has the responsibility of providing scientific and technical research and support to the Ministry relating to the varied uses of the Province's air resources.

The Research Grants Programme (RGP) was developed to encourage applied research directed toward providing the information and techniques necessary for the attainment and maintenance of a high standard of air quality in Ontario.

The goals of the Research Grants Program are

- a) to procure research in the field of atmospheric pollution through mission-oriented projects related to Air Resources Branch objectives in air quality management, and
- b) to help maintain in Ontario a high level of competence in air pollution science and technology by providing seed money or partial support for on-going research programs related to Air Resources Branch program objectives.

Air Resources Branch research grants are intended primarily to cover operating expenses such as: the employment of assistants, supplies, computing services, field trips, and minor equipment. It is assumed that the basic facilities required to carry out the proposed work are already available to the applicant.

Applicants are encouraged to read this booklet in full before attempting an application. If further information is required, applicants may contact the Programme Coordinator.

2. ELIGIBILITY:

Applications for grants will be accepted from any university, institute of technology, community college, or non-profit research institute in Ontario, NO LATER THAN THE LAST DAY OF JANUARY, for projects which are to commence the following fiscal year (April 1 - March 31). All proposals must clearly pertain to air pollution science or technology.

3. APPLICATION FORMAT:

Applications should be made in triplicate and should contain the following information:

- a) A project title.
- b) A statement of the objective(s)
- c) A general description of the proposed study, its significance and relevance to air pollution science or technology.
- d) A brief statement of the annual work programme.
- e) A list of the anticipated results.
- f) A detailed budget.
- g) The names of principal and junior investigators.
A brief resume of the principal investigator(s) with a list of recent publications should be included, if one has not been submitted with a recent application.
- h) For projects involving salary payments to university or other educational institution faculty members, authorization from the dean of the

faculty and the head of the department must be included. (See restrictions described in section 9, however).

- i) A signed acceptance of the conditions of funding, including signatures, where applicable, of the principal investigator, the head of the department, the dean of the faculty and the director of the office of research administration.
- j) The name and address of the university administrator(s)
 - a) to whom the award cheque should be sent.
 - b) who will be responsible for financial administration of the grant.
- k) Summary form RGP-1 (enclosed or obtain from Coordinator).

4. EVALUATION:

Applications are reviewed in two stages. First, each application is evaluated by scientists or engineers in the Air Resources Branch, assisted by other branches when appropriate. This evaluation, along with the application, is then reviewed by the Selection Committee, which is composed of senior staff members of the Air Resources Branch and other branches of the Ministry.

The evaluations are carried out on the basis of the following criteria:

- a) The scientific or technical soundness of the proposal.
- b) The competence of the applicant(s) in the relevant discipline as well as the facilities available to the applicant.
- c) The need for the proposed work and the potential benefits to the Ministry's programme that would result from the execution of the proposed research.
- d) The amount of alternate funding received for the project, or related projects.
- e) The performance of those who have received previous funding.
- f) The amount of money requested relative to the availability of funds for the RGP.

5. CONDITIONS OF FUNDING:

All applications must contain a signed copy of the following statement:

"I hereby certify that, to the best of my knowledge and belief, the estimates in the aforementioned budget are accurate and truly reflect how the grant monies will be dispensed and that I agree to accept and comply with the Conditions of Award, as specified in the Research Grants Programme Information Booklet, upon receipt of an Air Resources Branch Research Grant". These conditions are as follows:

5.1 CONDITIONS OF AWARD:

- a) Provide the Branch with copies of all reports or publications resulting from this work.
- b) Provide the Branch with a written report on the work completed during each fiscal year for which the grant was held.
- c) Provide the Branch with a certified statement of expenditures at the end of each fiscal year.
- d) Provide the Branch, at the end of the fiscal year, with a list of capital equipment (as defined in the RGP Information Booklet) purchased with grant monies.
- e) Return all capital equipment purchased with grant monies at the end of the fiscal year or alternatively, make some other suitable arrangement with the Programme Coordinator, if the equipment will continue to be used to carry out related work.
- f) Immediately notify the Coordinator of any change in the scope or nature of the work programme, and return all funds to the Ministry not required to carry out the approved, revised programme.

- g) Return to the Ministry all monies remaining at the completion of the project.
- h) Make a presentation annually of the results obtained at one of the ARB Research Grant Seminars (see below), for the duration of the project.

6. RESEARCH GRANT SEMINARS:

All grant recipients are expected to make a full presentation of the results obtained during the study at one of the Branch's Research Grant Seminars, normally held in January of each year. Except in unusual circumstances, the presentation should be given by the principal investigator. If for some reason this is impossible, a suitable replacement, who is familiar with the work, should be appointed.

Presentations will normally be approximately 30 minutes long and shall be open to the scientific community. Participating investigators shall be notified of the seminar time and location well in advance. The location of the seminars will normally be Toronto.

Standard 2" carousel type slide and viewgraph over-head projectors will be provided by the Branch.

7. FINANCIAL STATEMENTS:

A financial statement certified by the office of research administration of the recipient's institution must be submitted to the Branch at the end of the fiscal year (March 31) for which the grant was awarded.

8. CAPITAL EQUIPMENT:

All capital equipment (defined below) purchased with grant monies from the Air Resources Branch remains the property of the Branch and must be returned to the Branch at the end of the fiscal year, unless other arrangements are made with the coordinator. Such equipment may normally be retained as long as it is being used in air pollution research related to the original work programme.

Capital equipment includes such things as: power supplies, meteorological towers, air or source samplers or monitors, pumps, anemometers, recorders, transducers, calculators or computers, precipitation samplers, chromatographs, and spectrometers or spectrophotometers.

A list of all such capital equipment purchased with ARB grant monies must be submitted at the end of each fiscal year for the duration of the project.

In cases where doubt exists concerning an item's classification, whether of a supply or capital nature, the Coordinator should be consulted.

9. SALARIES

The principal investigator(s) and other senior research staff associated with the project who normally receive a salary on a continuing, annual basis from a university or college may not receive salary payments (supplements) or fees for services from an Air Resources Branch Research Grants Programme award. Salary payments to post doctoral fellows, graduate students, technicians or other assistants should not exceed recommended NSERC rates.

10. RESEARCH GRANT MONITORS:

One or two Ministry staff members shall be designated as the "Grant Monitor(s)" for each research grant awarded. He/she will be the grant recipient's liaison with the Branch and will act on requests for guidance or assistance. The Grant Monitor shall be responsible each year for a brief evaluation of the progress made in each research programme he/she monitors. It is thus important that each Grant Monitor maintain contact with the grant recipient throughout the year. This may require the occasional visitation of the investigator's facilities, as well as other forms of communication.

11. ALTERNATE FUNDING:

Applicants must indicate whether funds for the project or a similar project have been or are going to be solicited elsewhere. The following information should be included:

- a) The name of the other agencies.
- b) The amount sought from each agency.
- c) The amount received to date from each source.

12. NOTIFICATION & ADMINISTRATION OF FUNDS:

Successful applicants will be notified in writing by the Deputy Minister's office and a cheque for the amount awarded shall be enclosed with the letter of notification.

Unsuccessful applicants shall be notified at the latest by the thirtieth of April, while applicants whose proposals are recommended for complete or partial funding will normally receive notification within two weeks of the approval of the Provincial Budget by the Legislative Assembly of Ontario.

The funds will then be at the disposal of the applicant, according to the

terms of the budget contained in the application. The proper administration of the funds shall be the responsibility of the office of research administration of the institution concerned, and the Coordinator of the Research Grants Programme should be notified of any changes in the work programme or budget of the project.

Funds remaining at the completion of the fiscal year must be returned to the Ministry, if they will not be used to complete the project.

13. REPORTING OF RESULTS:

Grant recipients are encouraged to publish the results of their work. A report must be submitted to the Branch annually and upon completion of a project. In the case of a partially completed project, a status report describing the progress to date should be submitted. This is particularly important if the investigator intends to apply for renewal of funding, as additional funds normally will not be awarded until the report is received.

14. DURATION OF FUNDING:

The duration of a grant is for the period of one fiscal year. The awarding of a grant in any one year in no way implies that funding will be continued in subsequent years, unless this is specifically stated in the letter of notification. The budgetary information requested in Form RGP-1 should be provided for multi-year proposals in any case, so that the Selection Committee may evaluate the complete fiscal implications of the project.

15. OVERHEAD COSTS:

In view of the nature of the RGP, overhead costs will not be paid to the grantee's institution.

16. PROGRAMME OFFICERS:

The officers of the Research Grants Programme Selection Committee
are:

Chairman: Dr. G. Van Volkenburgh (416) 965-6343

Vice-Chairman: Dr. D. Balsillie (416) 965-2053

Coordinator: Dr. D.J. Corr (416) 965-4081

AIR RESOURCES BRANCH

Important Areas of Research

1983/84

1. Hazardous Airborne Contaminants:

- a) determination of sources, source strengths; sink mechanisms and strengths; atmospheric persistence and fate.
- b) development of sampling and analytical methods:
 - i) toxic organic vapours
 - ii) organic compounds and heavy metals in airborne particulate matter
 - iii) broad spectrum analytical schemes for above substances
- c) effects of Atmospheric Contaminants on Receptors:
 - i) effects on humans
 - ii) effects on vegetation/soils (phytotoxicology)
 - iii) effects on materials (corrosion, etc.)
 - iv) odours (measurement, quantification, assessment)

2. New Technology:

- a) gaseous pollutant control techniques
- b) particulate pollutant control techniques
- c) process developments yielding reduced emissions

3. Atmospheric Chemistry and Precipitation:

- a) primary pollutants (gaseous and particulate):
 - i) sources and source strengths of reactive substances
 - ii) sink mechanisms and strengths (precipitation scavenging, dry deposition, photochemical degradation, etc.)
 - iii) reaction kinetics, transport pathways and mechanisms
- b) secondary pollutants (gaseous and particulate):
 - i) formation mechanisms
 - ii) reaction kinetics
 - iii) sink mechanisms and strengths
 - iv) transport pathways and mechanisms
- c) modelling of atmospheric chemistry

4. Atmospheric Physics:

- a) atmospheric transport modelling, meso-scale modelling of winds
- b) transient release modelling (fires, chemicals spills, etc)

5. Instrumentation Development:

- a) samplers and monitors for major and trace atmospheric components
- b) source samplers and monitors; continuous monitors
- c) development of primary analytical and calibration standards.
- d) meteorological instrumentation - boundary layer turbulence characteristics
- e) portable, sensitive field monitors for specific contaminants, such as chlorine and inorganic chlorides, total reduced sulphur, and speciation of individual components, HF and fluorides, PCBs, organic vapors, PAHs.
- f) deposition rate monitors

Ontario Ministry of the Environment

Air Resources Branch

Research Grants Programme

(Office Use):

Proposal No. _____

Project No. _____

Project Title: _____

Principal Investigator (s) : _____
(Department/Address)

Institution: _____

Budget Summary: (See Section 14, RGP Booklet)
(Government of Ontario Fiscal Year, April 1
to March 31):

YEAR 1

YEAR 2

YEAR 3

Salaries:

.

Supplies &
Equipment

Services

Travel and
Communications:

Other
(Specify):

Total:

OTHER SIMILAR PROJECTS:

OTHER RESEARCH SUPPORT:

HAS THIS PROPOSAL OR ONE SIMILAR TO IT BEEN SUBMITTED
ELSEWHERE FOR FUNDING: IF SO, WHERE?

SUBMITTED BY: _____

DATE: _____

NAME: _____

TITLE: _____

ADDRESS: _____

TELEPHONE NUMBER: _____

COMPLETE STUDY

OBJECTIVES:

DESCRIPTION:

ANTICIPATED RESULTS:

POTENTIAL FOR IMPIEMENTATION OF RESULTS:

OUTLINE OF BENEFITS:

Ontario Ministry of the Environment

Air Resources Branch

Research Grants Programme

(Office Use):

Proposal No. _____

Project No. _____

Project Title: _____

Principal Investigator (s) : _____
(Department/Address)

Institution: _____

Budget Summary: (See Section 14, RGP Booklet)
(Government of Ontario Fiscal Year, April 1
to March 31):

YEAR 1

YEAR 2

YEAR 3

Salaries:

Supplies &
Equipment

Services

Travel and
Communications:

Other
(Specify):

Total: _____

OTHER SIMILAR PROJECTS:

OTHER RESEARCH SUPPORT:

HAS THIS PROPOSAL OR ONE SIMILAR TO IT BEEN SUBMITTED
ELSEWHERE FOR FUNDING: IF SO, WHERE?

SUBMITTED BY: _____

DATE: _____

NAME: _____

TITLE: _____

ADDRESS: _____

TELEPHONE NUMBER: _____

COMPLETE STUDY

OBJECTIVES:

DESCRIPTION:

ANTICIPATED RESULTS:

POTENTIAL FOR IMPLEMENTATION OF RESULTS:

OUTLINE OF BENEFITS:



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